



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/525,696	08/04/2005	Rene L. Cruz	0321.68.263	7642
24978 7590 07/01/2009 GREER, BURNS & CRAIN 300 S WACKER DR 25TH FLOOR CHICAGO, IL 60606				
EXAMINER KASRAIAN, ALLAHYAR				
ART UNIT		PAPER NUMBER		
2617				
MAIL DATE		DELIVERY MODE		
07/01/2009		PAPER		

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

**Advisory Action  
Before the Filing of an Appeal Brief**

<b>Application No.</b> 10/525,696	<b>Applicant(s)</b> CRUZ ET AL.
<b>Examiner</b> ALLAHYAR KASRAIAN	<b>Art Unit</b> 2617

***--The MAILING DATE of this communication appears on the cover sheet with the correspondence address --***

THE REPLY FILED 11 June 2009 FAILS TO PLACE THIS APPLICATION IN CONDITION FOR ALLOWANCE.

1. ☒ The reply was filed after a final rejection, but prior to or on the same day as filing a Notice of Appeal. To avoid abandonment of this application, applicant must timely file one of the following replies: (1) an amendment, affidavit, or other evidence, which places the application in condition for allowance; (2) a Notice of Appeal (with appeal fee) in compliance with 37 CFR 41.31; or (3) a Request for Continued Examination (RCE) in compliance with 37 CFR 1.114. The reply must be filed within one of the following time periods:

- a) ☐ The period for reply expires \_\_\_\_\_ months from the mailing date of the final rejection.  
b) ☒ The period for reply expires on: (1) the mailing date of this Advisory Action, or (2) the date set forth in the final rejection, whichever is later. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of the final rejection.  
Examiner Note: If box 1 is checked, check either box (a) or (b). ONLY CHECK BOX (b) WHEN THE FIRST REPLY WAS FILED WITHIN TWO MONTHS OF THE FINAL REJECTION. See MPEP 706.07(f).

Extensions of time may be obtained under 37 CFR 1.136(a). The date on which the petition under 37 CFR 1.136(a) and the appropriate extension fee have been filed is the date for purposes of determining the period of extension and the corresponding amount of the fee. The appropriate extension fee under 37 CFR 1.17(a) is calculated from: (1) the expiration date of the shortened statutory period for reply originally set in the final Office action; or (2) as set forth in (b) above, if checked. Any reply received by the Office later than three months after the mailing date of the final rejection, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**NOTICE OF APPEAL**

2. ☐ The Notice of Appeal was filed on \_\_\_\_\_. A brief in compliance with 37 CFR 41.37 must be filed within two months of the date of filing the Notice of Appeal (37 CFR 41.37(a)), or any extension thereof (37 CFR 41.37(e)), to avoid dismissal of the appeal. Since a Notice of Appeal has been filed, any reply must be filed within the time period set forth in 37 CFR 41.37(a).

**AMENDMENTS**

3. ☐ The proposed amendment(s) filed after a final rejection, but prior to the date of filing a brief, will not be entered because  
(a) ☐ They raise new issues that would require further consideration and/or search (see NOTE below);  
(b) ☐ They raise the issue of new matter (see NOTE below);  
(c) ☐ They are not deemed to place the application in better form for appeal by materially reducing or simplifying the issues for appeal; and/or  
(d) ☐ They present additional claims without canceling a corresponding number of finally rejected claims.

NOTE: \_\_\_\_\_. (See 37 CFR 1.116 and 41.33(a)).

4. ☐ The amendments are not in compliance with 37 CFR 1.121. See attached Notice of Non-Compliant Amendment (PTOL-324).  
5. ☐ Applicant's reply has overcome the following rejection(s): \_\_\_\_\_.  
6. ☐ Newly proposed or amended claim(s) \_\_\_\_\_ would be allowable if submitted in a separate, timely filed amendment canceling the non-allowable claim(s).  
7. ☐ For purposes of appeal, the proposed amendment(s): a) ☐ will not be entered, or b) ☐ will be entered and an explanation of how the new or amended claims would be rejected is provided below or appended.  
The status of the claim(s) is (or will be) as follows:  
Claim(s) allowed: \_\_\_\_\_.  
Claim(s) objected to: \_\_\_\_\_.  
Claim(s) rejected: \_\_\_\_\_.  
Claim(s) withdrawn from consideration: \_\_\_\_\_.

**AFFIDAVIT OR OTHER EVIDENCE**

8. ☐ The affidavit or other evidence filed after a final action, but before or on the date of filing a Notice of Appeal will not be entered because applicant failed to provide a showing of good and sufficient reasons why the affidavit or other evidence is necessary and was not earlier presented. See 37 CFR 1.116(e).  
9. ☐ The affidavit or other evidence filed after the date of filing a Notice of Appeal, but prior to the date of filing a brief, will not be entered because the affidavit or other evidence failed to overcome all rejections under appeal and/or appellant fails to provide a showing a good and sufficient reasons why it is necessary and was not earlier presented. See 37 CFR 41.33(d)(1).  
10. ☐ The affidavit or other evidence is entered. An explanation of the status of the claims after entry is below or attached.

**REQUEST FOR RECONSIDERATION/OTHER**

11. ☒ The request for reconsideration has been considered but does NOT place the application in condition for allowance because:  
See Continuation Sheet.  
12. ☐ Note the attached Information Disclosure Statement(s). (PTO/SB/08) Paper No(s). \_\_\_\_\_.  
13. ☐ Other: \_\_\_\_\_.

/Rafael Pérez-Gutiérrez/  
Supervisory Patent Examiner, Art Unit 2617

Continuation of 11, does NOT place the application in condition for allowance because:

On page 9 of the Applicant's arguments/remarks with respect to claims 8 and 9, Applicant argues, "Applicant... directs the Examiner to the next paragraph in the specification which states '[t]here must be  $K+1$  of these equations which are linearly independent. Once we have identified such a set of equations, we solve them by inverting a  $(K+1) \times (K+1)$  matrix' (Page 12, Lines 19-21). Further, the specification states that by '[u]sing a primal optimization approach, duty cycles of each transmission modes in an optimal scheduling policy can be calculated by formulation of the problem as a linear program.' (Page 13, Lines 23-25)."

Examiner respectfully traverses Applicant's argument. There is nothing to disclose to "determine duty cycle" on page 12 lines 7-21. Furthermore, there nothing to disclose a vector that determines the duty cycle on page 13, lines 23-25. Therefore, claims 8 and 9 are still rejected under 35 U.S.C. § 112, first paragraph.

On page 10 of the Applicant's arguments/remarks with respect to claim 1, Applicant argues, "The Examiner appears to be reading an access point as being equivalent to a transmission mode. Such a reading of Attar is improper. Indeed, an access point is a type of hardware, whereas a transmission mode is a type of operation for a hardware device. A single access point may include more than one transmission mode. In Attar, for a given access point, only a single signal to interference plus noise ratio would be calculated, regardless of how many transmission modes it has. To the contrary, claim 1 recites identifying a signal to interference plus noise ratio for each transmission mode."

Examiner respectfully traverses Applicant's argument since a 'forward link' for each access point is considered as each transmission mode. Therefore, claim 1 is rejected under 35 U.S.C. § 102(e) as being anticipated by Attar.

On page 11 of the Applicant's arguments/remarks with respect to claim 19, Applicant argues, "Agee makes no reference to determining transmission modes by minimizing a particular parameter. To the contrary, claim 19 recites determining transmission modes by minimizing a weighted sum of expended transmission power. Such a feature is not disclosed in Agee. Further, claim 19 recites minimizing a weighted sum of expended transmission power. Agee fails to disclose anything related to a weighted sum of expended transmission power, but instead merely describes power transmitted at a network node."

Examiner respectfully disagrees with Applicant for several reasons. First, Agee discloses and described the limitations of the claim from par. 0188-0195. The set of transmission modes can be considered as D12 and D21 as indicated on par. 0188 and 0191. Second, there is no description on the claim (neither any explanation by Applicant) to define what weighted sum is. Examiner considers the "weighted sum of expended transmission powers across the links" as total transmit power in the entire network as described on par. 0192 of Agee. Therefore, claim 19 is rejected under 35 U.S.C. § 102(e) as being anticipated by Agee.

On the first paragraph of page 12 of the Applicant's arguments/remarks with respect to claim 20, Applicant argues, "there is no discussion of [sending] setting an initial routing of traffic as recited in claim 20." Examiner respectfully disagrees with Applicant since Zountos clearly discloses, "The FE Layer is responsible to INITIALIZE the network infrastructure and provide the multiple-link lines of communication between backbone and matrix nodes and amongst matrix nodes" (see par. 0205 with consideration of par. 0196-0198).

On the second paragraph of page 12 of the Applicant's arguments/remarks with respect to claim 20, Applicant argues, "Zourntos fails to disclose anything related to 'computing a sensitivity of links in response to change of data rate' as recited in claim 20. Further, since Zourntos fails to disclose such sensitivity links, the reference fails to disclose adjusting the routing traffic using these links."

Examiner respectfully disagrees with Applicant. In addition to par. 0293, 0297, 0359, par. 0414 indicates, "On each matrix node weight update, the matrix node returns channel SINR measurement information for each spatial channel... Alternatively, the router can calculate the SINR at the matrix node remotely... the information rate on each spatial channel for a user or matrix node can be matched to the quality of the channel. In order to decide how to change the SINR on each iteration, the router refers to a table containing SINRs and corresponding data." As mentioned before, the sensitivity links is considered as SINR of the links. Therefore, claims 20 and 26 are rejected under 35 U.S.C. § 102(e) as being anticipated by Zountos.

The dependent claims 2-17, 21-24 and 27 are also rejected by the virtue of their dependency on claims 1, 19, 20 and 26.